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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/551,009	09/27/2005	Andrew Beger	DC5116 PCT1	1375
137 7590 12/08/2008 DOW CORNING CORPORATION CO1232 2200 W. SALZBURG ROAD P.O. BOX 994 MIDLAND, MI 48686-0994				
EXAMINER LOEWE, ROBERT S				
ART UNIT		PAPER NUMBER		
1796				
NOTIFICATION DATE		DELIVERY MODE		
12/08/2008		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patents.admin@dowcorning.com

Office Action Summary

Application No.

10/551,009

Applicant(s)

BEGER ET AL.

Examiner

ROBERT LOEWE

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 October 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-13, 15, 16 and 18-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-13, 15, 16, 18-21 and 23 is/are rejected.
- 7) ☒ Claim(s) 22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

Applicants state on the middle of page 9 of their arguments/remarks "As shown in the comparative examples in the attached affidavit". However, no such affidavit has been received by the Office and as such, any data presented therein cannot be considered at this time.

The rejection of instant claim 13 using Freiberg et al. in view of Altes et al. is withdrawn. Upon further consideration of claim 13 by the Examiner, it has been determined that Freiberg et al. alone teaches the cured sealant of instant claim 13, as described below. Specifically, the Examiner had previously relied upon the teachings of Altes et al. to satisfy the limitation of an air-sealant interface. However, upon closer examination of Applicant's specification, the titanium photocatalysts/curing catalyst present in the compositions serves "to photocatalyze the formation of the protective layer on the sealant at the air-sealant interface" (paragraph 0028 of the instant pre-grant publication). The sealants taught by Freiberg et al. are taught to have a small portion of the composition exposed to a moisture-containing atmosphere and thus inherently has an air-sealant interface.

Applicants arguments regarding the previously relied upon prior art rejections of claim 18 (Freiberg et al. in view of Mikami) have been fully considered and are found to be persuasive. Therefore, this rejection is withdrawn. The Examiner agrees that there would be no motivation to add component (c) as taught by Mikami to the composition taught by Freiberg et al. in order to improve the stain-proofing ability of the composition since the sealant compositions taught by Freiberg et al. are not taught to be used in applications where dirt-repellent properties are needed. Applicants arguments regarding the previously relied upon prior art rejection of claim 18

(Freiberg et al. in view of Hatanaka et al.) have been fully considered. The Examiner has removed this rejection as well but not by way of Applicants arguments. Component (c) of instant claim 18 is taught by Hatanaka et al. to improve the curing characteristics of the composition. However, no further teachings are given as to what specific properties are improved. As a result, there is insufficient motivation provided by Hatanaka et al. and this rejection has been removed.

Applicants argue that Freiberg et al. disclose a large genus and as such cannot be relied upon as prior art. However, it should be noted that Freiberg et al. explicitly teaches the use of dialkoxydisubstituted silanes, including methylvinyl dimethoxysilane. While Freiberg et al. also teaches that tri- and tetraalkoxysilanes are also useful is not sufficient to remove Freiberg et al. as a prior art reference. A reference may be relied upon for all that it teaches including non-preferred embodiments. While no silane coupling agents having only two hydrolyzable groups are employed in any specific teachings, it is nonetheless taught by Freiberg et al. to be an appropriate silane coupling agent. Further, there is no other limitation present in instant claim 13 which requires "picking and choosing" from Freiberg et al. The only component which not taught exclusively as claimed is component (b). Further, Freiberg et al. **explicitly** names methylvinyl dimethoxysilane as a suitable crosslinker. The lack of incorporation of this silane crosslinker in any preferred embodiments does not preclude Freiberg et al. from anticipating instant claim 13. A reference may be relied upon for all that it teaches, including non-preferred embodiments. Applicants argue that this situation is akin to the case decision of *In re Meyer*. However, in this case, one of Applicant's preferred silanes, methylvinyl dimethoxysilane, is

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explicitly listed as a possible silane crosslinker. *In re Meyer* was concerned with anticipation of a species based on a generic teaching. This is not the case in Freiberg et al.

Applicant's arguments on the bottom half of page 9 of their arguments/remarks seems to be directed to a 103 rejection. However, instant claim 13 is deemed by the Examiner to be anticipated by Freiberg et al., therefore such arguments cannot be persuasive.

This Office action is **non-final** owing to the new grounds of rejection which were not necessitated by amendment.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2-11, 13 and 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claim language of independent claim 13 "a cured sealant **consisting of** an elastomeric product **comprising**" is confusing. In light of this wording, the Examiner is unsure as to the metes and bounds of the claims, and what ingredients/features may be included or excluded. One suggestion which would overcome this rejection is to reword the claim preamble as follows: --A cured sealant comprising an elastomeric product, wherein the elastomeric product comprises--.

Claim Rejections - 35 USC § 102

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 2-9, 11-13, 15 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Freiberg et al. (US Pat. 6,132,664).

Claim 13: Freiberg et al. teaches a moisture-curable composition and a cured sealant having an air-sealant interface, wherein the moisture-curable composition comprises: (a) an organopolysiloxane having at least 1.2 silicon-bonded alkoxy/hydrolyzable chain terminations per molecule, and further teaches organopolysiloxanes having not less than two hydroxyl or hydrolyzable groups (2:50-59 and 4:40-5:52 and structure at 8:45). Freiberg et al. further teaches (b) an alkoxy silane having the formula $R^4_zSi(OR)_{4-z}$ where z can be 0, 1, or 2. When z is equal to 2, the organosilane has the formula $G_2-Si-R^1_2$ of instant claim 1 (3:1-7). Freiberg et al. further teaches that the composition comprises (c) a filler (3:9), and (d) a photocatalyst (2:60-67).

Freiberg et al. does not explicitly teach that the cured rubber/elastomer body has a surface with a maximum gloss value of 45. However, Freiberg et al. teaches the same compositions as that of instant claim 13. The courts have stated that a chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present. *In re Spada*, 911 F.2d 705, 15 USPQ2d 1655, (Fed. Cir. 1990). See also *In re Best*, 562 F.2d 1252, 195 USPQ 430, (CCPA 1977). "Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established."

Claims 2 and 3: Freiberg et al. further teaches that the organosilane (b) can be dimethyldimethoxysilane, vinylmethyldimethoxysilane, dimethyldiethoxysilane and ethylmethyldiethoxysilane (6:52-54).

Claims 4 and 5: Freiberg et al. further teaches that the filler (c) can be fumed silica and/or a fatty acid treated precipitated calcium carbonate (7:1-5).

Claims 6-8: Freiberg et al. further teaches that the photocatalyst is a titanate of the formula $Ti(OR^5)_4$ where R^5 is a hydrocarbon group. Examples include those found on column 8, lines 51-67. It is recognized by the examiner that component (d) is not referred to as a photocatalyst by Freiberg et al. However, because Freiberg et al. teaches the same species as those found in instant claims 6-8, it inherently follows that component (d) as taught by Freiberg et al. will function as a photocatalyst as claimed in instant claims 1 and 6-8.

Claim 9: Freiberg et al. further teaches that component (a) is a linear polydiorganosiloxane having terminal groups of $-Si(R^2)_2-R^3-Si(R^2)_k(OR^4)_{3-k}$. Examples include the polydiorganosiloxanes of formulas (I), (II), and (III) found on columns 4 and 5 and polymer 1 found on column 8 of Freiberg et al.

Claim 11: Using example 2A of Table 1, Freiberg et al. further teaches the composition of instant claim 1. Specifically, when normalizing the values of table 1 to account for 100 parts of component (a), Freiberg et al. teaches: 100 parts of component (a), 3.4 parts of component (b), 46 parts of component (c), and 2.3 parts of component (d) (Table 1, sample 2A). Sample 2A is just a representative example, as the other entries in table 1 also effectively teach instant claim 11.

Claim 12: Freiberg et al. further teaches an elastomeric product comprising the composition of instant claim 1 (1:8-19).

Claim 15: Freiberg et al. further teaches a method of forming an elastomeric mass between surfaces which is adherent to at least two such surfaces which method comprises introducing between the surfaces a mass of a moisture curable composition of instant claim 1 and curing the composition in the presence of moisture (7:25-8:30). While Freiberg et al. does not explicitly teach curing the compositions in the presence of light, such a limitation is considered inherent in Freiberg et al. especially when considering the experiment which measures cure rate measured by skin over time (SOT) (9:30-43). In said experiment, a stopwatch was utilized and the SOT was measured by lightly touching the surface with the end of a finger. This experiment requires the presence of light (both to see the stopwatch and to see the substrate so as to monitor the SOT), thus the presence of light during the curing step is inherent.

Claim 16: Since Freiberg et al. teaches that the amount of component (B) of instant claim 1 is present at, for example, 3.4 parts by weight based on 100 parts by weight of component (A). Since Freiberg et al. also teaches some of the same species of component (B), it inherently follows that Freiberg et al. teaches that component (B) contains from 0.2-7 parts by weight alkenyl content.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 4, 6-9, 11-13, 15, 18-20 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kamis et al. (US Pat. 4,898,910) in view of Mikami (US Pat. 4,683,251). Both of these references have been cited on a previous PTO-892 form.

Claim 13: Kamis et al. teaches curable polysiloxane compositions and cured silicone sealants, wherein the curable polysiloxane composition comprises a polysiloxane having at least two silicon-bonded alkoxy groups (1:51-13), an alkoxysilane which preferably has two alkoxy groups and two alkyl groups (2:13-20 and 4:49-5:2 and example 2), a filler (5:23-53), and a curing catalyst/photocatalyst (5:3-22).

Kamis et al. does not explicitly teach the addition of an unsaturated component which may be an unsaturated linear or cyclic siloxane, an unsaturated fatty acid, an unsaturated fatty acid ester or an unsaturated fatty alcohol. However, Mikami does teach the addition of such unsaturated fatty acids and fatty acid esters (5:5-36). In a preferred embodiment, Mikami teaches linseed oil which comprises a mixture of saturated and mono- and poly-unsaturated fatty acids. Kamis et al. and Mikami are combinable because they are from the same field of

endeavor, namely, moisture-curable silicone-based sealants. At the time of the invention, a person having ordinary skill in the art would have found it obvious to add the unsaturated compounds, such as those taught by Mikami into the compositions as taught by Kamis et al. and would have been motivated to do so because Mikami teaches that the addition of such unsaturated fatty acids greatly improves the staining resistance of the cured silicone sealants (4:43-58). Mikami teaches that the silicone sealants are particularly suitable as a sealant material for filling spaces and gaps as in sealing buildings (6:13-16). In such applications, exposure to the elements is inevitable. Adding the stain-proofing component(s) taught by Mikami to the sealant compositions taught by Kamis et al. would provide an additional benefit to the sealants taught by Mikami.

Claim 4: Kamis et al. teaches that the filler may comprise, *inter alia*, silica and calcium carbonate (5:23-52).

Claims 6-8: Kamis et al. teaches that the curing catalyst/photocatalyst is a titanium catalyst (5:3-22). One **preferred** titanium catalyst is tetrabutyltitanate (example 1), which satisfies the limitations of instant claims 6-8.

Claim 9: Kamis et al. teaches that the alkoxy-terminated polysiloxanes may have end-units which satisfy the limitations of instant claim 9 (1:51-2:13).

Claim 11: Kamis et al. teaches 100 parts by weight of component (a), 0.1 to 14 parts by weight of component (b), 0.2 to 6 parts by weight of component (d), and from 5 to 60 parts by weight of component (c) (claim 1 and 5:47-49). The ranges of each component either substantially overlaps or partially overlaps with the ranges of each component of claim 11.

Claim 15: The desired intended use of the cured compositions taught by Kamis et al. is sealants. It follows that a person having ordinary skill in the art would appreciate the many circumstances in which two substrates are joined together in some fashion and then treated with the curable silicone composition which then cured to make a sealant. Employment of the composition collectively taught by Kamis et al. and Mikami would satisfy the limitations of instant claim 15. Applying the sealant composition to a building would be done under conditions of moisture and light.

Claim 18: Kamis et al. teaches curable polysiloxane compositions and cured silicone sealants, wherein the curable polysiloxane composition comprises a polysiloxane having at least two silicon-bonded alkoxy groups (1:51-13), an alkoxysilane which preferably has two alkoxy groups and two alkyl groups (2:13-20 and 4:49-5:2 and example 2), a filler (5:23-53), and a curing catalyst/photocatalyst (5:3-22). A **preferred** curing catalyst is taught to include bis-(acetylacetonyl)diisopropyltitanate, which is a dialkoxy-functional chelated titanate.

Kamis et al. does not explicitly teach the addition of an unsaturated component which may be an unsaturated linear or cyclic siloxane, an unsaturated fatty acid, an unsaturated fatty acid ester or an unsaturated fatty alcohol. However, Mikami does teach the addition of such unsaturated fatty acids and fatty acid esters (5:5-36). In a preferred embodiment, Mikami teaches linseed oil which comprises a mixture of saturated and mono- and poly-unsaturated fatty acids. Kamis et al. and Mikami are combinable because they are from the same field of endeavor, namely, moisture-curable silicone-based sealants. At the time of the invention, a person having ordinary skill in the art would have found it obvious to add the unsaturated compounds, such as those taught by Mikami into the compositions as taught by Kamis et al. and

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would have been motivated to do so because Mikami teaches that the addition of such unsaturated fatty acids greatly improves the staining resistance of the cured silicone sealants (4:43-58). Mikami teaches that the silicone sealants are particularly suitable as a sealant material for filling spaces and gaps as in sealing buildings (6:13-16). In such applications, exposure to the elements is inevitable. Adding the stain-proofing component(s) taught by Mikami to the sealant compositions taught by Kamis et al. would provide an additional benefit to the sealants taught by Mikami.

Claim 19: Kamis et al. teaches that the alkoxy-terminated polysiloxanes may have end-units which satisfy the limitations of instant claim 19 (1:51-2:13).

Claim 20: Kamis et al. teaches that the filler may comprise, *inter alia*, silica and calcium carbonate (5:23-52).

Claim 23: Kamis et al. teaches 100 parts by weight of component (a), 0.1 to 14 parts by weight of component (b), 0.2 to 6 parts by weight of component (d), and from 5 to 60 parts by weight of component (c) (claim 1 and 5:47-49). The ranges of each component either substantially overlaps or partially overlaps with the ranges of each component of claim 23.

Allowable Subject Matter

Claims 22 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Specifically, none of the art of record teach or suggest the addition of an unsaturated component which is an unsaturated organopolysiloxane having a degree of polymerization from 2 to 50 and having at least two silicon bonded functional groups, which are

reactable with the hydroxy or hydrolyzable groups of component (a). Instant claim 10 would also be found to be allowable for the same reasons as instant claim 22 should Applicants overcome the 112, second paragraph rejection.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Loewe whose telephone number is (571)270-3298. The examiner can normally be reached on Monday through Friday from 5:30 AM to 3:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/R. L./
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/Randy Gulakowski/

Supervisory Patent Examiner, Art Unit 1796